



RAW SEQUENCE LISTING ERROR REPORT

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Application Serial Number: 09/674,546
Source: PCT09
Date Processed by STIC: 6/6/03

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- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

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Revised 04/24/2003



USPTO - Patent
Office - Needle

PCT09

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/674,546

DATE: 06/06/2003

TIME: 14:00:47

Input Set : E:\Chir0334.txt
Output Set: N:\CRF4\06062003\I674546.raw

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3 <110> APPLICANT: Fraser, Clair
4     Galeotti, Cesira
5     Grandi, Guido
6     Hickey, Erin
7     Mesignani, Vega
8     Mora, Marirosa
9     Peterson, Jeremy
10    Pizza, Marigrazia
11    Rappuoli, Rino
12    Ratti, Giulio
13    Scarloto, Vincenzo
14    Scarselli, Maria
15    Tettelin, Herve
16    Venter, Craig
18 <120> TITLE OF INVENTION: Neisseria Meningitidis Antigens and Compositions
20 <130> FILE REFERENCE: CHIR0334
22 <140> CURRENT APPLICATION NUMBER: 09/674,546
23 <141> CURRENT FILING DATE: 1999-04-30 (International Filing Date)
25 <160> NUMBER OF SEQ ID NOS: 3264
27 <170> SOFTWARE: PatentIn Ver. 2.1

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ERRORED SEQUENCES

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2193 <210> SEQ ID NO: 64
2194 <211> LENGTH: 234 → found 202
2195 <212> TYPE: PRT
2196 <213> ORGANISM: Neisseria meningitidis
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2199 <221> NAME/KEY: UNSURE
2200 <222> LOCATION: (1)
2201 <223> OTHER INFORMATION: Xaa is any amino acid
2203 <220> FEATURE:
2204 <221> NAME/KEY: UNSURE
2205 <222> LOCATION: (34)
2206 <223> OTHER INFORMATION: Xaa is any amino acid
2208 <220> FEATURE:
2209 <221> NAME/KEY: UNSURE
2210 <222> LOCATION: (112) → No Xaa found at position 112
2211 <223> OTHER INFORMATION: Xaa is any amino acid
2213 <400> SEQUENCE: 64
W--> 2214 Xaa Gln Leu Ser Lys Ser Gly Leu Asn Cys Ala Val Leu Ser Lys Val
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Input Set : E:\Chir0334.txt
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2217 Phe Pro Thr Arg Ser His Thr Val Ala Ala Gln Gly Gly Ile Ser Ala
 2218 20 25 30
 2220 Ser Xaa Gly Asn Val Gln Glu Asp Arg Trp Asp Trp His Met Tyr Asp
 2221 35 40 45
 2223 Thr Val Lys Gly Ser Asp Trp Leu Gly Asp Gln Asp Ala Ile Glu Phe
 2224 50 55 60
 2226 Met Cys Arg Ala Ala Pro Glu Ala Val Ile Glu Leu Glu His Met Gly
 2227 65 70 75 80
 2229 Met Pro Phe Asp Arg Val Glu Ser Gly Lys Ile Tyr Gln Arg Pro Phe
 2230 85 90 95
 2232 Cys Ala Val Ala Asp Arg Thr Gly His Ala Met Leu His Thr Leu Tyr
 2233 100 105 110
 2235 Gln Gln Asn Val Arg Ala Asn Thr Gln Phe Phe Val Glu Trp Thr Ala
 2236 115 120 125
 2238 Gln Asp Leu Ile Arg Asp Glu Asn Gly Asp Val Val Gly Val Thr Ala
 2239 130 135 140
 2241 Met Glu Met Glu Thr Gly Glu Val Tyr Ile Phe His Ala Lys Ala Val
 2242 145 150 155 160
 2244 Met Phe Ala Thr Gly Gly Gly Arg Ile Tyr Ala Ser Ser Thr Asn
 2245 165 170 175
 2248 Gly Ile Pro Leu Glu Asp Met Glu Phe Trp Gln Phe Gln Pro Thr Gly
 2249 180 185 190
 2251 Val Ala Gly Ala Gly Val Leu Ile Thr Glu
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 3592 <210> SEQ ID NO: 98
 3593 <211> LENGTH: 124
 3594 <212> TYPE: PRT
 3595 <213> ORGANISM: Neisseria meningitidis
 3597 <400> SEQUENCE: 98
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 3599 1 5 10 15
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 3602 20 25 30
 3604 Glu Lys Pro Leu Ala Gly Phe Trp Lys Ala Leu Pro His Leu Asn Asp
 3605 35 40 45
 3607 Thr Met Leu Leu Phe Thr Gly Leu Trp Leu Met Lys Ile Thr His Phe
 3608 50 55 60
 3610 Ser Pro Phe Asn Ala Pro Trp Leu Gly Thr Lys Ile Leu Leu Leu
 3611 65 70 75 80
 3613 Ala Tyr Ile Ala Leu Gly Met Met Met Met Arg Ala Arg Pro Arg Ser
 3614 85 90 95
 3616 Thr Lys Phe Tyr Thr Val Tyr Leu Leu Ala Met Cys Cys Leu Thr Cys
 3617 100 105 110
 3619 Ile Val Tyr Leu Ala Lys Thr Lys Val Leu Pro Phe
 3620 115 120
 8134 <210> SEQ ID NO: 213
 8135 <211> LENGTH: 393
 8136 <212> TYPE: DNA
 8137 <213> ORGANISM: Neisseria meningitidis

*Xaa detected, feature required
- see p. 18*

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Input Set : E:\Chir0334.txt
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 8141 agccgtgctg atggcaaaag agtccctgat gagccacatc gacattcaag aattgcagga 120
 8142 aaaggcccg tccggcgccg aattgtccac caccgaagcc ctgcgcctcg aactcttga 180
E--> 8143 aaaagtcaac gcgctggg0c atcgccgac aaggcttggg cgactgacc accgtgttg 240
E--> 8144 acgtgaaaat cctcgattat ccgaccacg ccgcctccaa accgattgcc atgattccg0 300
E--> 8145 aactgcgcg ccacccgcca cgtcgaattt gaattggacg gtcaggccc tgtcgaactc 360
E--> 8146 acgcccgcg gcgtcgaaga tggcccgatt tga 393
 8149 <210> SEQ ID NO: 214
 8150 <211> LENGTH: 130
 8151 <212> TYPE: PRT
 8152 <213> ORGANISM: Neisseria meningitidis
 8154 <400> SEQUENCE: 214
 8155 Met Gly Ala Gly Trp Cys Pro Pro Gly Ile Leu Gly Ile Gly Ile Gly
 8156 1 5 10 15
E--> 8158 Gly Xaa Ala Glu Lys Ala Val Leu Met Ala Lys Glu Ser Leu Met Ser
 8159 20 25 30
 8161 His Ile Asp Ile Gln Glu Leu Gln Glu Lys Ala Ala Ser Gly Ala Glu
 8162 35 40 45
 8164 Leu Ser Thr Thr Glu Ala Leu Arg Leu Glu Leu Phe Glu Lys Val Asn
 8165 50 55 60
 8167 Ala Leu Gly Ile Gly Ala Gln Gly Leu Gly Gly Leu Thr Thr Val Leu
 8168 65 70 75 80
 8170 Asp Val Lys Ile Leu Asp Tyr Pro Thr His Ala Ala Ser Lys Pro Ile
 8171 85 90 95
 8173 Ala Met Ile Pro Asn Cys Ala Ala Thr Arg His Val Glu Phe Glu Leu
 8174 100 105 110
 8176 Asp Gly Ser Gly Pro Val Glu Leu Thr Pro Pro Arg Val Glu Asp Gly
 8177 115 120 125
 8179 Pro Ile
 8180 130
 8844 <210> SEQ ID NO: 232
 8845 <211> LENGTH: 128
 8846 <212> TYPE: PRT
 8847 <213> ORGANISM: Neisseria meningitidis
 8849 <400> SEQUENCE: 232
 8850 Met Cys Met Pro Tyr Lys Ile Arg Val Ser Asp Gly Ile Cys Cys Pro
 8851 1 5 10 15
 8853 Met Pro Ser Glu Thr Arg Asn Gln Arg Ala Ser Ala Cys Phe Lys Ser
 8854 20 25 30
 8856 Ser Ile Lys Ser Pro Thr Tyr Ser Lys Pro Thr Asp Arg Arg Thr Asn
 8857 35 40 45
 8859 Pro Gly Arg Met Leu Ala Ala Ser Phe Ser Ser Gly Cys Ile Leu Pro
 8860 50 55 60
 8862 Cys Val Val Val His Gly Trp Val Met Val Glu Arg Thr Ser Pro Arg
 8863 65 70 75 80
 8865 Leu Ala Val Arg Glu Lys Ser Ser Thr Pro Ser Thr Thr Phe His Ala
 8866 85 90 95
E--> 8869 Ala Ser Xaa Ser Ala Thr Ser Lys Pro Met Thr Met Pro Pro Pro Phe

Xaa found, feature required, see p. 18

Xaa found, some error

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Input Set : E:\Chir0334.txt
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8870	100	105	110
E--> 8872 Cys Cys Leu Arg Ile Ser Ala Ala Xaa Gly Trp Ser Asp Asn Pro Val			
8873	115	120	125
8894 <210> SEQ ID NO: 234			
8895 <211> LENGTH: 130			
8896 <212> TYPE: PRT			
8897 <213> ORGANISM: Neisseria meningitidis			<i>- Some end</i>
8899 <400> SEQUENCE: 234			
8900 Thr Cys Met Ser Tyr Lys Ile Arg Val Ser Asp Gly Ile Cys Gly Val			
8901 1 5 10 15			
E--> 8903 Phe Pro Pro Met Pro Ser Glu Xaa Arg Asn Gln Arg Ala Ser Ala Cys			
8904 20 25 30			
8906 Phe Lys Ser Ser Ile Lys Ser Pro Thr Tyr Ser Lys Pro Thr Asp Arg			
8907 35 40 45			
8909 Arg Thr Asn Pro Gly Arg Met Leu Ala Ala Ser Phe Ser Ser Gly Cys			
8910 50 55 60			
8912 Ile Leu Pro Cys Val Val His Gly Trp Val Met Val Glu Arg Thr			
8913 65 70 75 80			
8915 Ser Pro Arg Leu Ala Val Arg Glu Lys Ser Ser Thr Pro Ser Thr Thr			
8916 85 90 95			
8918 Phe His Ala Ala Ala Trp Ser Ala Thr Ser Lys Pro Met Thr Met Pro			
8919 100 105 110			
8921 Pro Pro Phe Cys Cys Leu Arg Ile Ser Ser Ala Gly Trp Ser Gly Asn			
8922 115 120 125			
8924 Pro Val			
8925 130			
9467 <210> SEQ ID NO: 250			
9468 <211> LENGTH: 455			
9469 <212> TYPE: PRT			
9470 <213> ORGANISM: Neisseria meningitidis			<i>- Some end</i>
9472 <400> SEQUENCE: 250			
9473 Met Lys Pro Leu Asp Leu Asn Phe Ile Cys Gln Ala Leu Lys Leu Pro			
9474 1 5 10 15			
9476 Met Pro Ser Glu Ser Lys Pro Val Ser Arg Ile Val Thr Asp Ser Arg			
9477 20 25 30			
9479 Asp Ile Arg Ala Gly Asp Val Phe Phe Ala Leu Ala Gly Glu Arg Phe			
9480 35 40 45			
9482 Asp Ala His Asp Phe Val Glu Asp Val Leu Ala Ala Gly Ala Ala Ala			
9483 50 55 60			
9485 Val Val Val Ser Arg Glu Asp Cys Ala Ala Met Asp Gly Ala Leu Lys			
9486 65 70 75 80			
9488 Val Asp Asp Thr Leu Ala Ala Leu Gln Thr Leu Ala Lys Ala Trp Arg			
9489 85 90 95			
9491 Glu Asn Val Asn Pro Phe Val Phe Gly Ile Thr Gly Ser Gly Gly Lys			
9492 100 105 110			
9494 Thr Thr Val Lys Glu Met Leu Ala Ala Val Leu Arg Arg Arg Phe Gly			
9495 115 120 125			
9497 Asp Asp Ala Val Leu Ala Thr Ala Gly Asn Phe Asn Asn His Ile Gly			
9498 130 135 140			

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Input Set : E:\Chir0334.txt
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9500 Leu Pro Leu Thr Leu Leu Lys Leu Asn Glu Lys His Arg Tyr Ala Val
9501 145 150 155 160
E--> 9503 Ile Glu Met Gly Met Asn His Phe Gly Glu Leu Ala Val Leu Thr Xaa
 9504 165 170 175
 9506 Ile Ala Lys Pro Asn Ala Ala Leu Val Asn Asn Ala Met Arg Ala His
 9507 180 185 190
 9509 Val Gly Cys Gly Phe Asp Gly Val Gly Asp Ile Ala Lys Ala Lys Ser
 9510 195 200 205
 9512 Glu Ile Tyr Gln Gly Leu Cys Ser Asp Gly Ile Ala Leu Ile Pro Gln
 9513 210 215 220
 9515 Glu Asp Ala Asn Met Ala Val Phe Lys Thr Ala Thr Leu Asn Leu Asn
 9516 225 230 235 240
 9518 Thr Arg Thr Phe Gly Ile Asp Ser Gly Asp Val His Ala Glu Asn Ile
 9519 245 250 255
 9521 Val Leu Lys Pro Leu Ser Cys Glu Phe Asp Leu Val Cys Gly Asp Glu
 9522 260 265 270
 9524 Arg Ala Ala Val Val Leu Pro Val Pro Gly Arg His Asn Val His Asn
 9525 275 280 285
 9527 Ala Ala Ala Ala Ala Leu Ala Leu Ala Gly Leu Ser Leu Asn
 9528 290 295 300
 9530 Asp Val Ala Glu Gly Leu Lys Gly Phe Ser Asn Ile Lys Gly Arg Leu
 9531 305 310 315 320
 9533 Asn Val Lys Ser Gly Ile Lys Gly Ala Thr Leu Ile Asp Asp Thr Tyr
 9534 325 330 335
 9536 Asn Ala Asn Pro Asp Ser Met Lys Ala Ala Ile Asp Val Leu Ala Arg
 9537 340 345 350
 9539 Met Pro Ala Pro Arg Ile Phe Val Met Gly Asp Met Gly Glu Leu Gly
 9540 355 360 365
 9542 Glu Leu Gly Glu Asp Glu Ala Ala Ala Met His Ala Glu Val Gly Ala
 9543 370 375 380
 9545 Tyr Ala Arg Asp Gln Gly Ile Glu Ala Ala Tyr Phe Val Gly Asp Asn
 9546 385 390 395 400
 9548 Ser Val Glu Ala Ala Glu Lys Phe Gly Ala Asp Gly Leu Trp Phe Ala
 9549 405 410 415
 9551 Ala Lys Asp Pro Leu Ile Gln Val Leu Arg His Asp Leu Pro Glu Arg
 9552 420 425 430
 9554 Ala Thr Val Leu Val Lys Gly Ser Arg Phe Met Gln Met Glu Glu Val
 9555 435 440 445
 9557 Val Glu Ala Leu Glu Asp Lys
 9558 450 455
 9762 <210> SEQ ID NO: 255
 9763 <211> LENGTH: 744
 9764 <212> TYPE: DNA
 9765 <213> ORGANISM: Neisseria meningitidis
 9767 <400> SEQUENCE: 255
E--> 9768 atgnngttgt tgaagttgcc tgccgtcgcc aacacggcat catcgccgaa acggcggcgc 60
 9769 aataccgcag ccagcatttc cttcacccgtc gtcttgcgc ccgaaccgt aatgccgaac 120
 9770 acaaacggat tcacatttc acgccacgccc tttgccagcg tttgcaatgc ggcaagcgtg 180
 9771 tcatcgactt tcaacgcgcc atccattgca gcacaatctt cgcgcgaaac cacaaccgcc 240

*/ n found, feature required
see p. 18*

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Output Set: N:\CRF4\06062003\I674546.raw

9772 gccgcaccag cagccaatac gtcttcaaca aaatcatgcg cgtcaaaccg ctcgcccggcc 300
 9773 aatgcgaaaa acacatcgcc cgcgcgatg tcgcggctgt cggttacat ggcgacacg 360
 9774 ggtttgcattt cagacggcat cggaaacctt agggcttggc agatgaaatt taggtccagt 420
 9775 ggtttcatat ttacttcgt taatattcgg gcccggaca catcgtagc ggctgatttt 480
 9776 tttatcgctt gtttgcgt ggtaaaacac agattatttt cccatttca ttcggsattt 540
 9777 tttctgtacg tatttttt tagacgtatt tttagtcgtat ttgcctttc cccatcacca 600
 9778 cggcgcgggg tcgtcggca gtccgtcgat aaaggcaagg ttattgcctt cggccctgcac 660
 9779 atcgggaaca ttcccccaaa aatcatagcc gtcatcgccc aactcgctgg tttcgataacc 720
 9780 cgtccaactg cccgaaatccgc gtaa 744
 9783 <210> SEQ ID NO: 256
 9784 <211> LENGTH: 247
 9785 <212> TYPE: PRT
 9786 <213> ORGANISM: Neisseria meningitidis
 9788 <400> SEQUENCE: 256

Xxx found
- Some error

E--> 9789 Met Xaa Leu Leu Lys Leu Pro Ala Val Ala Asn Thr Ala Ser Ser Pro
 9790 1 5 10 15
 9792 Lys Arg Arg Arg Asn Thr Ala Ala Ser Ile Ser Phe Thr Val Val Leu
 9793 20 25 30
 9795 Pro Pro Glu Pro Val Met Pro Asn Thr Asn Gly Phe Thr Phe Ser Arg
 9796 35 40 45
 9798 His Ala Phe Ala Ser Val Cys Asn Ala Ala Ser Val Ser Ser Thr Phe
 9799 50 55 60
 9801 Asn Ala Pro Ser Ile Ala Ala Gln Ser Ser Arg Glu Thr Thr Thr Ala
 9802 65 70 75 80
 9804 Ala Ala Pro Ala Ala Asn Thr Ser Ser Thr Lys Ser Cys Ala Ser Asn
 9805 85 90 95
 9807 Arg Ser Pro Ala Asn Ala Lys Asn Thr Ser Pro Ala Arg Met Ser Arg
 9808 100 105 110
 9810 Leu Ser Val Thr Met Arg Asp Thr Gly Leu Leu Ser Asp Gly Ile Gly
 9811 115 120 125
 9813 Ser Leu Arg Ala Trp Gln Met Lys Phe Arg Ser Ser Gly Phe Ile Phe
 9814 130 135 140
 9816 Thr Phe Val Asn Ile Arg Ala Ala Asp Thr Ser Val Ala Ala Asp Phe
 9817 145 150 155 160
 9819 Phe Ile Ala Cys Phe Ala Val Val Lys His Arg Leu Phe Ser His Ser
 9820 165 170 175
 E--> 9822 His Ser Xaa Phe Phe Leu Tyr Val Ser Phe Phe Arg Arg Ile Phe Ser
 9823 180 185 190
 9825 Arg Phe Ala Phe Ser Arg Ile Pro Arg Arg Gly Val Val Gly Gln Ser
 9826 195 200 205
 9828 Val Asp Lys Gly Lys Val Ile Ala Phe Ala Leu His Ile Gly Asn Ile
 9829 210 215 220
 9831 Pro Pro Lys Ile Ile Ala Val Ile Gly Gln Leu Val Gly Phe Asp Thr
 9832 225 230 235 240
 9834 Arg Pro Thr Ala Glu Ser Ala
 9835 245
 9987 <210> SEQ ID NO: 261
 9988 <211> LENGTH: 694
 9989 <212> TYPE: DNA

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9990 <213> ORGANISM: Neisseria meningitidis *- n found, same error*
 9992 <400> SEQUENCE: 261
 9993 atgaaaacaat ccggccgaaat aaaaatatga atcagacatt actttataca ttgggcattt 60
E--> 9994 gcgcgccttt aacctttnnn nnnnnnnnnn nnnnnnnnnn nnnntatcac ccngaataatg 120
 9995 aatacgcta ccgttattct gccgtgggtg ctttgcttc ggttgtattt ttattattat 180
 9996 tggcacgcgg tttccgcgc gtttcttcag ttgtttact gatttacgtc ggcacaaccg 240
 9997 ccctatattt gccggctggc tggctgtatg gtgcgccgtc ttatcagata gtcgggtcga 300
 9998 tattggaaag caatcctgcc gaggcgcgtg aatttgcgg caatctccc gggtcgctt 360
 9999 attttgtca ggcattattt ttcattttgc gcttgcagt ttggaaatat tttgtatcgg 420
 10000 ggggggtatt tgctgacgta aaaaactata aacgcccgcag caaaatatgg ctgactataat 480
 10001 tattgacttt gattttgtcc tgccgcgtg tggataaaat cgccagcgat aaagatttc 540
 10002 gagaacctga tgccgcctg ttgttgaata ttttcgaccc gtattacgtat ttggcttc 600
 10003 cgccggcaca atatgccgc aagcgcgcac acattttggc agcagcaaaa aaagcgtcaa 660
 10004 catggcatat ccgtcatgtt ggcggcaagt ataa 694
 10007 <210> SEQ ID NO: 262
 10008 <211> LENGTH: 231
 10009 <212> TYPE: PRT
 10010 <213> ORGANISM: Neisseria meningitidis *- X22 - Same error*
 10012 <400> SEQUENCE: 262
E--> 10013 Met Lys Gln Ser Ala Arg Ile Lys Xaa Met Asn Gln Thr Leu Leu Tyr
 10014 1 5 10 15
E--> 10016 Thr Leu Gly Ile Cys Ala Leu Leu Thr Phe Xaa Xaa Xaa Xaa Xaa Xaa
 10017 20 25 30
E--> 10019 Xaa Xaa Xaa Tyr His Pro Glu Tyr Glu Tyr Gly Tyr Arg Tyr Ser Ala
 10020 35 40 45
 10022 Val Gly Ala Leu Ala Ser Val Val Phe Leu Leu Leu Leu Ala Arg Gly
 10023 50 55 60
 10025 Phe Pro Arg Val Ser Ser Val Val Leu Leu Ile Tyr Val Gly Thr Thr
 10026 65 70 75 80
 10028 Ala Leu Tyr Leu Pro Val Gly Trp Leu Tyr Gly Ala Pro Ser Tyr Gln
 10029 85 90 95
 10031 Ile Val Gly Ser Ile Leu Glu Ser Asn Pro Ala Glu Ala Arg Glu Phe
 10032 100 105 110
 10034 Val Gly Asn Leu Pro Gly Ser Leu Tyr Phe Val Gln Ala Leu Phe Phe
 10035 115 120 125
 10037 Ile Phe Gly Leu Thr Val Trp Lys Tyr Cys Val Ser Gly Gly Val Phe
 10038 130 135 140
 10040 Ala Asp Val Lys Asn Tyr Lys Arg Arg Ser Lys Ile Trp Leu Thr Ile
 10041 145 150 155 160
 10043 Leu Leu Thr Leu Ile Leu Ser Cys Ala Val Met Asp Lys Ile Ala Ser
 10044 165 170 175
 10046 Asp Lys Asp Leu Arg Glu Pro Asp Ala Gly Leu Leu Leu Asn Ile Phe
 10047 180 185 190
E--> 10049 Asp Leu Tyr Tyr Asp Leu Ala Xaa Arg Ala Gly Thr Ile Cys Arg Gln
 10050 195 200 205
 10052 Ala Arg Pro His Phe Gly Ser Ser Lys Lys Ser Val Asn Met Ala Tyr
 10053 210 215 220
 10055 Pro Ser Cys Cys Ala Gln Val
 10056 225 230

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Input Set : E:\Chir0334.txt
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10079 <210> SEQ ID NO: 264
 10080 <211> LENGTH: 231
 10081 <212> TYPE: PRT
 10082 <213> ORGANISM: Neisseria meningitidis *- Some errr*
 10084 <400> SEQUENCE: 264
 10085 Met Lys Gln Ser Ala Arg Ile Lys Asn Met Asp Gln Thr Leu Lys Asn
 10086 1 5 10 15
 10088 Thr Leu Gly Ile Cys Ala Leu Leu Ala Phe Cys Phe Gly Ala Ala Ile
 10089 20 25 30
 10091 Ala Ser Gly Tyr His Leu Glu Tyr Glu Tyr Gly Tyr Arg Tyr Ser Ala
 10092 35 40 45
 10094 Val Gly Ala Leu Ala Ser Val Val Phe Leu Leu Leu Ala Arg Gly
 10095 50 55 60
 10097 Phe Pro Arg Val Ser Ser Val Val Leu Leu Ile Tyr Val Gly Thr Thr
 10098 65 70 75 80
 10100 Ala Leu Tyr Leu Pro Val Gly Trp Leu Tyr Gly Ala Pro Ser Tyr Gln
 10101 85 90 95
 10103 Ile Val Gly Ser Ile Leu Glu Ser Asn Pro Ala Glu Ala Arg Glu Phe
 10104 100 105 110
 10106 Val Gly Asn Leu Pro Gly Ser Leu Tyr Phe Val Gln Ala Leu Phe Phe
 10107 115 120 125
 10109 Ile Phe Gly Leu Thr Val Trp Arg Tyr Cys Val Ser Gly Gly Val Phe
 10110 130 135 140
 10112 Ala Asp Val Lys Asn Tyr Lys Arg Arg Ser Lys Ile Trp Leu Thr Ile
 10113 145 150 155 160
 10115 Leu Leu Thr Leu Ile Leu Ser Cys Ala Val Met Asp Lys Ile Ala Ser
 10116 165 170 175
 10118 Asp Lys Asp Leu Arg Glu Pro Asp Ala Gly Leu Leu Leu Asn Ile Phe
 10119 180 185 190
E--> 10121 Asp Leu Tyr Tyr Asp Leu Ala Ser Xaa Ala Gly Thr Ile Cys Arg Gln
 10122 195 200 205
 10124 Ala Arg Pro His Phe Gly Ser Ser Lys Lys Ser Val Asn Met Ala Tyr
 10125 210 215 220
 10127 Pro Ser Cys Cys Ala Gln Val
 10128 225 230
 10383 <210> SEQ ID NO: 274
 10384 <211> LENGTH: 396
 10385 <212> TYPE: PRT
 10386 <213> ORGANISM: Neisseria meningitidis *- Some errr*
 10388 <400> SEQUENCE: 274
 10389 Met Val Val Leu Met Thr Ala Phe Ser Leu Leu Met Ile Tyr Ser Ala
 10390 1 5 10 15
 10392 Ser Val Tyr Leu Ala Ser Lys Glu Gly Gly Asp Gln Phe Phe Tyr Leu
 10393 20 25 30
 10395 Thr Arg Gln Ala Gly Phe Val Val Ala Gly Leu Ile Ala Ser Gly Leu
 10396 35 40 45
 10398 Leu Trp Phe Leu Cys Arg Met Arg Thr Trp Arg Arg Leu Val Pro Trp
 10399 50 55 60
 10401 Ile Phe Ala Leu Ser Gly Leu Leu Val Val Leu Ile Ala Gly

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Input Set : E:\Chir0334.txt
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10402	65	70	75	80
10404	Arg Glu Ile Asn Gly Ala Thr Arg Trp Ile Pro Leu Gly Pro Leu Asn			
10405		85	90	95
10408	Phe Gln Pro Thr Glu Leu Phe Lys Leu Ala Val Ile Leu Tyr Leu Ala			
10409		100	105	110
10411	Ser Leu Phe Thr Arg Arg Glu Glu Val Leu Arg Ser Met Glu Ser Leu			
10412		115	120	125
10414	Gly Trp Gln Ser Ile Trp Arg Gly Thr Ala Asn Leu Ile Met Ser Ala			
10415		130	135	140
E--> 10417	Thr Asn Pro Gln Xaa Arg Arg Glu Thr Leu Glu Met Tyr Gly Arg Xaa			
10418	145	150	155	160
10420	Arg Ala Ile Ile Leu Pro Ile Met Leu Val Ala Phe Gly Leu Val Leu			
10421		165	170	175
10423	Ile Met Val Gln Pro Asp Phe Gly Ser Phe Val Val Ile Thr Val Ile			
10424		180	185	190
10426	Ala Val Gly Met Leu Phe Leu Ala Gly Leu Pro Trp Lys Tyr Phe Phe			
10427		195	200	205
10429	Val Leu Val Gly Ser Val Leu Gly Gly Met Val Leu Met Ile Thr Ala			
10430		210	215	220
10432	Ala Pro Tyr Arg Val Gln Arg Val Val Ala Phe Leu Asp Pro Trp Lys			
10433		225	230	235
10435	Asp Pro Gln Gly Ala Gly Tyr Gln Leu Thr His Ser Leu Met Ala Ile			
10436		245	250	255
10438	Gly Arg Gly Glu Trp Phe Gly Met Gly Leu Gly Ala Ser Leu Ser Lys			
10439		260	265	270
10441	Arg Gly Phe Leu Pro Glu Ala His Thr Asp Phe Ile Phe Ala Ile Ile			
10442		275	280	285
10444	Ala Glu Glu Phe Gly Phe Phe Gly Met Cys Val Leu Ile Phe Cys Tyr			
10445		290	295	300
10447	Gly Trp Leu Val Val Arg Ala Phe Ser Ile Gly Lys Gln Ser Arg Asp			
10448		305	310	315
10450	Leu Gly Leu Thr Phe Asn Ala Tyr Ile Ala Ser Gly Ile Gly Ile Trp			
10451		325	330	335
E--> 10453	Ile Gly Xaa Gln Ser Phe Phe Asn Ile Gly Val Asn Ile Gly Ala Leu			
10454		340	345	350
E--> 10456	Pro Xaa Lys Gly Leu Thr Xaa Pro Xaa Met Ser Xaa Gly Gly Ser Ser			
10457		355	360	365
E--> 10459	Val Phe Phe Met Leu Ile Ser Met Met Leu Leu Xaa Arg Ile Asp Tyr			
10460		370	375	380
10462	Glu Asn Arg Arg Lys Met Arg Gly Tyr Arg Val Glu			
10463		385	390	395
10678	<210> SEQ ID NO: 279			
10679	<211> LENGTH: 1008			
10680	<212> TYPE: DNA			
10681	<213> ORGANISM: Neisseria meningitidis		<i>Some error</i>	
10683	<400> SEQUENCE: 279			
10684	atgggcggta aaacctttat gctgawkkcg ggcggAACGG gcggacatat ttcccccg 60			
10685	ctggcggtgg cggattcatt gcgccgcgcgc ggccatcatg tgatttggct gggcagcaag 120			
10686	gattcgatgg aagagcgtat cgtgccgcaa tacggcatac gcttgaaac gctggcgatt 180			

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/674,546

DATE: 06/06/2003

TIME: 14:00:48

Input Set : E:\Chir0334.txt

Output Set: N:\CRF4\06062003\I674546.raw

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/674.546

DATE: 06/06/2003
TIME: 14:00:48

Input Set : E:\Chir0334.txt
Output Set: N:\CRF4\06062003\I674546.raw

E--> 10754 Xaa Ala Gly Leu Gly Ala
 10755 245 250 255
 10757 Leu Leu Val Pro Tyr Pro His Ala Val Asp Asp His Gln Thr Ala Asn
 10758 260 265 270
 10760 Ala Arg Phe Met Val Gln Ala Glu Ala Gly Leu Leu Leu Pro Gln Thr
 10761 275 280 285
 10763 Gln Leu Thr Ala Glu Lys Leu Ala Glu Ile Leu Gly Gly Leu Asn Arg
 10764 290 295 300
 10766 Glu Lys Cys Leu Lys Trp Ala Glu Asn Ala Arg Thr Leu Ala Leu Pro
 10767 305 310 315 320
 10769 His Ser Ala Asp Asp Val Ala Glu Ala Ala Ile Ala Cys Ala Ala
 10770 325 330 335
 10982 <210> SEQ ID NO: 285
 10983 <211> LENGTH: 1131
 10984 <212> TYPE: DNA
 10985 <213> ORGANISM: Neisseria meningitidis *Some error*
 10987 <400> SEQUENCE: 285

~ Some error

E--> 10988 atgttttat ggctcgaca ttcagcanc tggtaaccg gtctgaatnn nnnnnnnnnn 60
 E--> 10989 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 120
 E--> 10990 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 180
 E--> 10991 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 240
 E--> 10992 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 300
 E--> 10993 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 360
 E--> 10994 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 420
 E--> 10995 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 480
 E--> 10996 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnggcgtgg tcggctttt ggttgtct 540
 10997 tacctgacca tcgtcgac atccaatgccc gtcaacctca ccgacggctt ggacggcctt 600
 10998 gcgacccccc cccgtcgctt cgttgcgcgc ggcctcgcca tcttcgccta tgccacgcgc 660
 10999 cactcacaat ttgcccaata cctgcaattt ctttacgttg ccggcgcaaa cgaagtggtg 720
 11000 attttctgtt ccgcattgtt cggcgcgtgc ctgcgtttct tttgtgtttaa cgcctatccc 780
 11001 gcgcaggatct ttatggcga tttcggttgc ttggcattgg gtgcgcgcgtt cggtaccgtc 840
 11002 gccgttatcg tccgccaaga gtttgccttc gtcattatgg gtcggatttt ttgtcgtagaa 900
 11003 gccgttatccg ttatgcttca gtttggctgg tataagaaaa ccaaaaaacg catttccctg 960
 11004 atggcgccca tccatcacca ctacgaacaa aaaggcttgg aagaaaacccaa agtcgtcg 1020
 11005 cgcttttggaa ttattaccat cgtcttgggtt ttgtatcggtt tgtagtaccct caaaatccgc 1080
 11006 tgaacctatg ccgtctgaac atcttcaga cggcatttga acgcgcata a 1131
 11009 <210> SEQ ID NO: 286
 11010 <211> LENGTH: 376
 11011 <212> TYPE: PRT
 11012 <213> ORGANISM: Neisseria meningitidis
 11014 <400> SEQUENCE: 286
 11015 Met Phe Leu Trp Leu Ala His Phe Ser Asn Trp Leu Thr Gly Leu Asn
 11016 1 5 10 15
 11018 Ile Phe Gln Tyr Thr Thr Phe Arg Ala Val Met Ala Ala Leu Thr Ala
 11019 20 25 30
 11021 Leu Ala Phe Ser Leu Met Phe Gly Pro Trp Thr Ile Arg Arg Leu Thr
 11022 35 40 45
 11024 Ala Leu Lys Cys Gly Gln Ala Val Arg Thr Asp Gly Pro Gln Thr His
 11025 50 55 60

RAW SEQUENCE LISTING
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Input Set : E:\Chir0334.txt
 Output Set: N:\CRF4\06062003\I674546.raw

11027 Leu Val Lys Asn Gly Thr Pro Thr Met Gly Gly Ser Leu Ile Leu Thr
 11028 65 70 75 80
 11030 Ala Ile Thr Val Ser Thr Leu Leu Trp Gly Asn Trp Ala Asn Pro Tyr
 11031 85 90 95
 11033 Ile Trp Ile Leu Leu Gly Val Leu Ala Thr Gly Ala Leu Gly Phe
 11034 100 105 110
 11036 Tyr Asp Asp Trp Arg Lys Val Val Tyr Lys Asp Pro Asn Gly Val Ser
 11037 115 120 125
 11039 Ala Lys Phe Lys Met Val Trp Gln Ser Ser Val Ala Val Ile Ala Gly
 11040 130 135 140
 11042 Leu Ala Leu Phe Tyr Leu Ala Ala Asn Ser Ala Asn Asn Ile Leu Ile
 11043 145 150 155 160
 11045 Val Pro Phe Phe Lys Gln Ile Ala Leu Pro Leu Gly Val Val Gly Phe
 11046 165 170 175
 11048 Leu Val Leu Ser Tyr Leu Thr Ile Val Gly Thr Ser Asn Ala Val Asn
 11049 180 185 190
 11051 Leu Thr Asp Gly Leu Asp Gly Leu Ala Thr Phe Pro Val Val Leu Val
 11052 195 200 205
 11054 Ala Ala Gly Leu Ala Ile Phe Ala Tyr Ala Ser Gly His Ser Gln Phe
 11055 210 215 220
 11057 Ala Gln Tyr Leu Gln Leu Pro Tyr Val Ala Gly Ala Asn Glu Val Val
 11058 225 230 235 240
 11060 Ile Phe Cys Thr Ala Met Cys Gly Ala Cys Leu Gly Phe Leu Trp Phe
 11061 245 250 255
 11063 Asn Ala Tyr Pro Ala Gln Val Phe Met Gly Asp Val Gly Ala Leu Ala
 11064 260 265 270
 11066 Leu Gly Ala Ala Leu Gly Thr Val Ala Val Ile Val Arg Gln Glu Phe
 11067 275 280 285
 11069 Val Leu Val Ile Met Gly Gly Leu Phe Val Val Glu Ala Val Ser Val
 11070 290 295 300
 11072 Met Leu Gln Val Gly Trp Tyr Lys Lys Thr Lys Lys Arg Ile Phe Leu
 11073 305 310 315 320
 11075 Met Ala Pro Ile His His His Tyr Glu Gln Lys Gly Trp Lys Glu Thr
 11076 325 330 335
 11078 Gln Val Val Val Arg Phe Trp Ile Ile Thr Ile Val Leu Val Leu Ile
 11079 340 345 350
E--> 11081 Gly Leu Ser Thr Leu Lys Ile Arg Xaa Thr Tyr Ala Val Xaa Thr Ser
 11082 355 360 365
 11084 Phe Arg Arg His Leu Asn Ala Gln
 11085 370 375
 11263 <210> SEQ ID NO: 292
 11264 <211> LENGTH: 149
 11265 <212> TYPE: PRT
 11266 <213> ORGANISM: Neisseria meningitidis
 11268 <400> SEQUENCE: 292
E--> 11269 Met Pro Pro Lys Ile Thr Xaa Ser Gly Phe Cys Lys Pro Ala Ile Ala
 11270 1 5 10 15
 11272 Ala Ala Val Ala Pro Thr Phe Val Pro Leu Leu Ser Ser Ile Asn Thr
 11273 20 25 30

- Some errr

RAW SEQUENCE LISTING
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DATE: 06/06/2003
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Input Set : E:\Chir0334.txt
Output Set: N:\CRF4\06062003\I674546.raw

11275 Thr Pro Phe Phe Ser Pro Ile Phe Ser Thr Arg Cys Gly Arg Pro Trp
 11276 35 40 45
 11278 Lys Val Leu Thr Cys Ser Ser Asn Ala Ser Arg Asp Lys Pro Met Ala
 11279 50 55 60
E--> 11281 Ser His Lys Ala Thr Ala Ala Met Thr Leu Ala Ala Leu Cys Xaa Pro
 11282 65 70 75 80
 11284 Cys Asn Gly Met Ser Cys Val Thr Ile Lys Ser Ser Leu Pro Cys Phe
 11285 85 90 95
 11287 Arg Arg Pro Val Ser Arg Ser Asn Gln Lys Ser Ala Ser Cys Ser Asn
 11288 100 105 110
 11290 Glu Asn His Phe Thr Ser Arg Pro Ala Arg Phe Ile Ala Arg Gln Asn
 11291 115 120 125
 11293 Ala Ser Ser Ala Phe Lys Thr Cys Thr Pro Ser Pro Arg Lys Ile Leu
 11294 130 135 140
 11296 Ala Leu Val Cys Ala
 11297 145
 11367 <210> SEQ ID NO: 296
 11368 <211> LENGTH: 118
 11369 <212> TYPE: PRT
 11370 <213> ORGANISM: Neisseria gonorrhoeae *same env*
 11372 <400> SEQUENCE: 296
 11373 Met Arg Val Val Glu Gln Ile Val Val Ala Val Glu Met Val Phe Gly
 11374 1 5 10 15
 11376 Asn Val His His Arg Arg Arg Ser Arg Ala Gln Ala Phe Gly Val Phe
 11377 20 25 30
 11379 Gln Leu Glu Ala Gly Lys Leu Pro His Pro His Val Arg Leu Phe Ala
 11380 35 40 45
 11382 Phe Ala Leu Gln Phe Cys Leu Gln Asp Gly Arg Thr Asp Ile Ala Arg
 11383 50 55 60
 11385 Asn Asp Gly Ile Gln Pro Ala Leu Asp Ala Glu Ile Ala Asp Gln Ala
 11386 65 70 75 80
 11388 Gly Tyr Arg Gly Phe Ala Val Ala Ala Gly Asn Arg Asn His Leu Val
 11389 85 90 95
E--> 11391 Ala Ala Ala Val His Asn Val Arg Gln Gln Leu Asp Val Ala Xaa His
 11392 100 105 110
E--> 11394 Ala Xaa Arg Arg Phe Ala
 11395 115
 11412 <210> SEQ ID NO: 298
 11413 <211> LENGTH: 118
 11414 <212> TYPE: PRT
 11415 <213> ORGANISM: Neisseria meningitidis *same env*
 11417 <400> SEQUENCE: 298
 11418 Met Arg Ile Val Glu Gln Val Val Ala Val Glu Met Val Phe Gly
 11419 1 5 10 15
 11421 Asn Val Gln His Arg Arg Arg Ser Arg Thr Gln Ala Phe Gly Val Phe
 11422 20 25 30
 11424 Gln Leu Glu Ala Gly Lys Leu Gln His Pro His Val Arg Leu Phe Ala
 11425 35 40 45
 11427 Phe Ala Leu Pro Phe Arg Leu Gln Asn Arg Arg Ala Asp Ile Ala Arg

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/674,546

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Input Set : E:\Chir0334.txt
 Output Set: N:\CRF4\06062003\I674546.raw

11428	50	55	60	
11430	Asp Asn Gly Ile Gln Pro Ala Leu Asp Thr Glu Ile Ala Asp Gln Ala			
11431	65	70	75	80
11433	Arg Tyr Arg Gly Phe Ala Val Ala Ala Gly Asn Arg Asn Tyr Leu Val			
11434		85	90	95
11436	Val Pro Ala Val His Asn Val Arg Gln Gln Phe Asp Val Ala Gln His			
11437		100	105	110

E--> 11439 Ala Xaa Arg Arg Phe Ala

11440	115				
11457	<210> SEQ ID NO: 300				
11458	<211> LENGTH: 118				
11459	<212> TYPE: PRT				
11460	<213> ORGANISM: Neisseria meningitidis				
11462	<400> SEQUENCE: 300				
11463	Met Arg Val Val Glu Gln Val Val Val Ala Val Glu Met Val Phe Gly				
11464	1	5	10	15	
11466	Asn Val Gln His Cys Arg Arg Ser Arg Ala Gln Ala Phe Gly Val Phe				
11467		20	25	30	
11469	Gln Leu Glu Thr Gly Lys Leu Gln His Pro His Val Arg Leu Phe Ala				
11470		35	40	45	
11472	Phe Ala Leu Gln Phe Arg Leu Gln Asn Arg Arg Ala Asp Ile Ala Arg				
11473		50	55	60	
11475	Asp Asn Gly Ile Gln Pro Thr Leu Asp Ala Glu Ile Ala Asp Gln Ala				
11476		65	70	75	80
11478	Arg Tyr Arg Gly Phe Ala Val Ala Ala Gly Asn Arg Asn His Leu Val				
11479		85	90	95	
11481	Ala Ala Ala Val His Asn Val Arg Gln Gln Phe Asp Val Ala Gln His				
11482		100	105	110	

E--> 11484 Ala Xaa Arg Arg Phe Ala

11485	115			
12254	<210> SEQ ID NO: 318			
12255	<211> LENGTH: 276			
12256	<212> TYPE: PRT			
12257	<213> ORGANISM: Neisseria meningitidis			
12259	<400> SEQUENCE: 318			
12260	Met Gln Asn Phe Gly Lys Val Ala Val Leu Met Gly Gly Phe Ser Ser			
12261	1	5	10	15
12263	Glu Arg Glu Ile Ser Leu Asp Ser Gly Thr Ala Ile Leu Asn Ala Leu			
12264		20	25	30
12266	Lys Ser Lys Gly Ile Asp Ala Tyr Ala Phe Asp Pro Lys Glu Thr Pro			
12267		35	40	45
12269	Leu Ser Glu Leu Lys Ala Gln Gly Phe Gln Thr Ala Phe Asn Ile Leu			
12270		50	55	60

E--> 12272 His Gly Thr Tyr Gly Xaa Asp Gly Ala Val Gln Gly Ala Leu Glu Leu

12273	65	70	75	80
12275	Leu Gly Ile Pro Tyr Thr Gly Ser Gly Val Ala Ala Ser Ala Ile Gly			
12276		85	90	95
12278	Met Asp Lys Tyr Arg Cys Lys Leu Ile Trp Gln Ala Leu Gly Leu Pro			
12279		100	105	110

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/674,546

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Input Set : E:\Chir0334.txt
 Output Set: N:\CRF4\06062003\I674546.raw

12281 Val Pro Glu Phe Ala Val Leu His Asp Asp Thr Asp Phe Asp Ala Val
 12282 115 120 125
 12284 Glu Glu Lys Leu Gly Leu Pro Met Phe Val Lys Pro Ala Ala Glu Gly
 12285 130 135 140
 12287 Ser Ser Val Gly Val Val Lys Val Lys Gly Lys Gly Arg Leu Lys Ser
 12288 145 150 155 160
E--> 12290 Val Tyr Glu Glu Leu Lys His Leu Gln Xaa Arg Asn His Cys Arg Thr
 12291 165 170 175
 12293 Phe Tyr Arg Arg Arg Arg Ile Phe Leu Pro Arg Pro Glu Arg Gln Arg
 12294 180 185 190
 12296 Ala Ala Arg His Thr His His Ser Arg Asn Arg Val Leu Arg Leu Arg
 12297 195 200 205
 12299 Ser Gln Val Gln Pro Arg Arg His His Leu Ser Met Ser Phe Gly Arg
 12300 210 215 220
 12302 Phe Asp Arg Ser Arg Arg Lys Pro Asp Ala Arg Thr Gly Gly Ser Arg
 12303 225 230 235 240
 12305 Arg Ala Gly Asn Arg Cys Gly Arg Leu Arg Ala Arg Arg Phe Pro Gln
 12306 245 250 255
 12308 Arg Tyr Arg Arg Gln Thr Leu Ser Val Gly Asn Gln His Pro Ala Arg
 12309 260 265 270
 12311 Tyr Asp Glu Pro
 12312 275
 76670 <210> SEQ ID NO: 1818
 76671 <211> LENGTH: 770 → found 72!
 76672 <212> TYPE: PRT
 76673 <213> ORGANISM: Neisseria meningitidis *some error*
 76675 <400> SEQUENCE: 1818
 76676 Gly Asx Asx Phe Phe Phe Phe Leu Phe Ala Leu Met Lys Arg Ile
 76677 1 5 10 15
 76679 Phe Leu Pro Ala Leu Pro Ala Ile Leu Pro Leu Ser Thr Tyr Ala Asp
 76680 20 25 30
 76682 Leu Pro Leu Thr Ile Glu Asp Ile Met Thr Asp Lys Gly Lys Trp Lys
 76683 35 40 45
 76685 Leu Glu Thr Ser Leu Thr Tyr Leu Asn Ser Glu Asn Asn Arg Ala Glu
 76686 50 55 60
 76688 Leu Ala Ala Pro Val Tyr Ile Gln Thr Gly Ala Thr Ser Phe Ile Pro
 76689 65 70 75 80
 76691 Ile Pro Thr Glu Ile Gln Glu Asn Gly Ser Asn Thr Asp Met Leu Val
 76692 85 90 95
 76694 Gly Thr Leu Gly Leu Arg Tyr Gly Leu Thr Gly Asn Thr Asp Ile Tyr
 76695 100 105 110
 76697 Gly Ser Gly Ser Tyr Leu Trp His Glu Glu Arg Lys Leu Asp Gly Asn
 76698 115 120 125
 76700 Ser Lys Thr Arg Asn Lys Arg Met Ser Asp Val Ser Leu Gly Ile Ser
 76701 130 135 140
 76703 His Thr Phe Leu Lys Asp Asp Lys Asn Pro Ala Leu Ile Ser Phe Leu
 76704 145 150 155 160
 76706 Glu Ser Thr Val Tyr Glu Lys Ser Arg Asn Lys Ala Ser Ser Gly Lys
 76707 165 170 175

RAW SEQUENCE LISTING
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DATE: 06/06/2003
TIME: 14:00:51

Input Set : E:\Chir0334.txt
Output Set: N:\CRF4\06062003\I674546.raw

76709 Ser Trp Leu Ile Gly Ala Thr Thr Tyr Lys Ala Ile Asp Pro Ile Val
 76710 180 185 190
 76712 Leu Ser Leu Thr Ala Ala Tyr Arg Ile Asn Gly Ser Lys Thr Leu Ser
 76713 195 200 205
 76715 Asp Gly Ile Arg Tyr Lys Ser Gly Asn Tyr Leu Leu Asn Pro Asn
 76716 210 215 220
 76718 Ile Ser Phe Ala Ala Asn Asp Arg Ile Ser Leu Thr Gly Gly Ile Gln
 76719 225 230 235 240
 76721 Trp Leu Gly Arg Gln Pro Asp Arg Thr Asp Gly Lys Arg Glu Ser Ser
 76722 245 250 255
 76724 Arg Asn Thr Ser Thr Tyr Ala His Phe Gly Ala Gly Phe Gly Phe Thr
 76725 260 265 270
 76727 Lys Thr Thr Ala Leu Asn Ala Ser Ala Arg Phe Asn Val Ser Gly Gln
 76728 275 280 285
 76730 Cys Tyr Glx Asn Arg Met Ala Leu Met His Ala Asp Glu Phe Ala Leu
 76731 290 295 300
 76733 Thr Pro Ala Arg Ala Gly Arg Ala Pro His Phe Asn Thr Asp Asp Ser
 76734 305 310 315 320
 76736 Glu Gln Glu Asn Cys Glu Cys Gln His Met His Asn His Ala His Trp
 76737 325 330 335
 76739 His Lys Ser Glu Arg Val Glu Arg Asp Ala Thr Ala Met His Cys His
 76740 340 345 350
 76742 Ile Arg Asn Asx Ser Glu Asp Cys Glx Glx Glx Pro Gly Thr Ile
 76743 355 360 365
 76745 Met Glu Ser Asn Glu Trp Arg Met Ala Asn Ser Tyr Met Asx Leu Ala
 76746 370 375 380
 76748 Arg Ile Ala Leu Cys Arg Ile Glu Arg Asn Glu Trp His Cys Phe Cys
 76749 385 390 395 400
 76751 Phe Met Lys Arg Ile Phe Leu Pro Ala Leu Pro Ala Ile Leu Pro Leu
 76752 405 410 415
 76754 Ser Thr Tyr Ala Asp Leu Pro Leu Thr Ile Glu Asp Ile Met Thr Asp
 76755 420 425 430
 76757 Lys Gly Lys Trp Lys Leu Glu Thr Ser Leu Thr Tyr Leu Asn Ser Glu
 76758 435 440 445
E--> 76760 Asn Asn Arg His Lys His Asp Pro His Pro Xaa Met Lys Arg
 76761 450 455 460
 76763 Ile Phe Leu Pro Ala Leu Pro Ala Ile Leu Pro Leu Ser Thr Tyr Ala
 76764 465 470 475 480
 76766 Asp Leu Pro Leu Thr Ile Glu Asp Ile Met Thr Asp Lys Gly Lys Trp
 76767 485 490 495
 76769 Lys Leu Glu Thr Ser Leu Thr Tyr Leu Asn Ser Glu Asn Asn Arg Met
 76770 500 505 510
 76772 His Lys Arg Ile Phe His Lys Asn Arg Met Ala Leu Phe His Lys Leu
 76773 515 520 525
 76775 Phe Lys Met Ile Cys Arg Ser Phe Thr Trp Arg Asp Ser Ala Ala Asp
 76776 530 535 540
 76778 Leu His Pro Trp Trp Lys Met Asn Phe Met Lys Arg Ile Phe Leu Pro
 76779 545 550 555 560
 76781 Ala Leu Pro Ala Ile Leu Pro Leu Ser Thr Tyr Ala Asp Leu Pro Leu

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/674,546

DATE: 06/06/2003

TIME: 14:00:51

Input Set : E:\Chir0334.txt

Output Set: N:\CRF4\06062003\I674546.raw

76782	565	570	575
76784	Thr Ile Glu Asp Ile Met Thr Asp Lys Gly Lys Trp Lys Leu Glu Thr		
76785	580	585	590
76787	Ser Leu Thr Tyr Leu Asn Ser Glu Asn Asn Arg Thr Ile Thr Leu Glu		
76788	595	600	605
76790	Pro Ile Asp Gly Ile Asp Ala Asn Glu Ala Asp Asp Ala Glu Ala Cys		
76791	610	615	620
76793	Asx Asp Cys Arg Thr Glu Asn Thr Arg Tyr Arg Glu Phe His Tyr Ala		
76794	625	630	635
76796	640		
76797	Pro Ala Thr Ala Asx Leu Glu Trp Arg Asp Asp Cys Met Glu Asn Thr		
76799	645	650	655
76800	Ser Met Met Ala Arg Tyr Ile Asn Phe Arg Met Ala Thr Ile Asn Asp		
76802	660	665	670
76803	Cys Met Glu Asn Thr Ser Met Met Ala Arg Tyr Ile Asn Phe Arg Met		
76805	675	680	685
76806	Phe Met Ile Cys Arg Ser Phe Thr Trp Arg Asp Asp Cys Met Glu Asn		
76808	690	695	700
76809	705	710	715
			720

E--> 76811 Thr Gln

VARIABLE LOCATION SUMMARY
PATENT APPLICATION: US/09/674,546

DATE: 06/06/2003
TIME: 14:00:56

Input Set : E:\Chir0334.txt
Output Set: N:\CRF4\06062003\I674546.raw

Use of n's or Xaa's(NEW RULES) :

Use of n's and/or Xaa's have been detected in the Sequence Listing.

Use of <220> to <223> is MANDATORY if n's or Xaa's are present.

in <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.

Seq#:4; Xaa Pos. 19,21,24
 Seq#:7; N Pos. 529
 Seq#:10; Xaa Pos. 19,59,107,114,208
 Seq#:21; N Pos. 350,374,375,376,377,378,379,380,381,382,383,384,385,386,387
 Seq#:21; N Pos. 388,389,390,391,392,393,394,395,396,397,398,399,400,401,402
 Seq#:21; N Pos. 403,404,405,406,407,408,409,410,411,412,413,414,415,416,417
 Seq#:21; N Pos. 418,419,420,421,422,423,424,425,426,427,428,429,430,431,432
 Seq#:21; N Pos. 433,434,435,436,437,438,439,440,441,442,443,444,445,446,447
 Seq#:21; N Pos. 448,449,450,451,452,453,454,455,456,457,458,459,460,461,462
 Seq#:21; N Pos. 463,464,465,466,467,468,469,470,471,472,473,474,475,476,477
 Seq#:21; N Pos. 478,479,480,481,482,483,484,485,486,487,488,489,490,491,492
 Seq#:21; N Pos. 493,494,495,496,497,498,499,500,501,502,503,504,505,506,507
 Seq#:21; N Pos. 508,509,510,511,512,513,514,515,516,517,518,519,520,521,522
 Seq#:21; N Pos. 523,524,525,526,527,528,529,530,531,532,533,534,535,536,537
 Seq#:21; N Pos. 538,539,540,541,542,543,544,545,546,547,548,549,550,551,552
 Seq#:21; N Pos. 553,554,555,556,557,558,559,560,561,562,563,564,565,566,567
 Seq#:21; N Pos. 568,569,570,571,572,573,574,575,576,577,578,579,580,581
 Seq#:22; Xaa Pos. 54,104,117,125,126,127,128,129,130,131,132,133,134,135
 Seq#:22; Xaa Pos. 136,137,138,139,140,141,142,143,144,145,146,147,148,149
 Seq#:22; Xaa Pos. 150,151,152,153,154,155,156,157,158,159,160,161,162,163
 Seq#:22; Xaa Pos. 164,165,166,167,168,169,170,171,172,173,174,175,176,177
 Seq#:22; Xaa Pos. 178,179,180,181,182,183,184,185,186,187,188,189,190,191
 Seq#:22; Xaa Pos. 192,193,194
 Seq#:40; Xaa Pos. 84
 Seq#:52; Xaa Pos. 98
 Seq#:63; N Pos. 1,100
 Seq#:64; Xaa Pos. 1,34
 Seq#:65; N Pos. 67,408
 Seq#:66; Xaa Pos. 23
 Seq#:71; N Pos. 67,408
 Seq#:72; Xaa Pos. 23
 Seq#:79; N Pos. 310,311,312,313,314,315,316,317,318,319,320,321,322,323,324
 Seq#:79; N Pos. 325,326,327,328,329,330,331,332,333,334,335,336,337,338,339
 Seq#:79; N Pos. 340,341,342,343,344,345,346,347,348,349,350,351,352,353,354
 Seq#:79; N Pos. 355,356,357,358,359,360,361,362,363,364,365,366,367,368,369
 Seq#:79; N Pos. 370,371,372,373,374,375,376,377,378,379,380,381,382,383,384
 Seq#:79; N Pos. 385,386,387,388,389,390,391,392,393,394,395,396,397,398,399
 Seq#:79; N Pos. 400,401,402,403,404,405,406,407,408,409,410,411,412,413,414
 Seq#:79; N Pos. 415,416,417,418,419,420,421,422,423,424,425,426,427,428,429
 Seq#:79; N Pos. 430,431,432,433,434,435,436,437,438,439,440,441,442,443,444
 Seq#:79; N Pos. 445,446,447,448,449,450,451,452,453,454,455,456,457,458,459
 Seq#:79; N Pos. 460,461,462,463,464,465,466,467,468,469,470,471,472,473,474
 Seq#:79; N Pos. 475,476,477,478,479,480,481,482,483,484,485,486,487,488,489

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Input Set : E:\Chir0334.txt
Output Set: N:\CRF4\06062003\I674546.raw

Seq#:79; N Pos. 490,491,492,493,494,495,496,497,498,499,500,501,502,503,504
Seq#:79; N Pos. 505,506,507,508,509,510,511,512,513,514,515,516,517,518,519
Seq#:79; N Pos. 541
Seq#:80; Xaa Pos. 104,105,106,107,108,109,110,111,112,113,114,115,116,117
Seq#:80; Xaa Pos. 118,119,120,121,122,123,124,125,126,127,128,129,130,131
Seq#:80; Xaa Pos. 132,133,134,135,136,137,138,139,140,141,142,143,144,145
Seq#:80; Xaa Pos. 146,147,148,149,150,151,152,153,154,155,156,157,158,159
Seq#:80; Xaa Pos. 160,161,162,163,164,165,166,167,168,169,170,171,172,173

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Input Set : E:\Chir0334.txt
Output Set: N:\CRF4\06062003\I674546.raw

L:23 M:256 W: Invalid Numeric Header Field, Wrong Current FILING DATE:YYYY-MM-DD
L:113 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:16
L:206 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:480
L:316 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:16
M:341 Repeated in SeqNo=10
L:792 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21 after pos.:300
M:341 Repeated in SeqNo=21
L:843 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:48
M:341 Repeated in SeqNo=22
L:1513 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:40 after pos.:80
L:1862 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:52 after pos.:96
L:2179 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:63 after pos.:0
M:341 Repeated in SeqNo=63
L:2214 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:64 after pos.:0
M:341 Repeated in SeqNo=64
L:2252 M:252 E: No. of Seq. differs, <211> LENGTH:Input:234 Found:202 SEQ:64
L:2272 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:65 after pos.:60
M:341 Repeated in SeqNo=65
L:2318 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66 after pos.:16
L:2715 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:71 after pos.:60
M:341 Repeated in SeqNo=71
L:2760 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:72 after pos.:16
L:3078 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:79 after pos.:300
M:341 Repeated in SeqNo=79
L:3115 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:80 after pos.:96
M:341 Repeated in SeqNo=80
L:3260 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:84 after pos.:112
L:3425 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:90 after pos.:16
M:341 Repeated in SeqNo=90
L:3584 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:97 after pos.:60
L:3601 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:98
L:3978 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:109 after pos.:0
M:341 Repeated in SeqNo=109
L:4117 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:110 after pos.:0
M:341 Repeated in SeqNo=110
L:4332 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:115
L:4341 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:115 after pos.:240
L:4371 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:116 after pos.:80
L:4758 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:124 after pos.:32
M:341 Repeated in SeqNo=124
L:5035 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:130 after pos.:64
L:5496 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:143
L:5503 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:143 after pos.:120
M:341 Repeated in SeqNo=143
L:5529 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:144 after pos.:32
M:341 Repeated in SeqNo=144
L:5597 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:146 after pos.:64
L:5746 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:149

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Input Set : E:\Chir0334.txt
 Output Set: N:\CRF4\06062003\I674546.raw

L:5768 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:149 after pos.:1020
 L:5848 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:150 after pos.:256
 M:341 Repeated in SeqNo=150
 L:6805 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:168 after pos.:16
 M:341 Repeated in SeqNo=168
 L:7233 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:184 after pos.:0
 L:7385 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:190 after pos.:0
 L:7626 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:196 after pos.:0
 L:8143 M:254 E: No. of Bases conflict, LENGTH:Input:240 Counted:239 SEQ:213
 L:8143 M:320 E: (1) Wrong Nucleic Acid Designator, NUMBER OF INVALID KEYS:1
 M:254 Repeated in SeqNo=213
 L:8146 M:252 E: No. of Seq. differs, <211> LENGTH:Input:393 Found:391 SEQ:213
 L:8158 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:214
 L:8869 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:232
 M:340 Repeated in SeqNo=232
 L:8903 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:234
 L:9503 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:250
 L:9768 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:255
 L:9789 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:256
 M:340 Repeated in SeqNo=256
 L:9994 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:261
 L:10013 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:262
 M:340 Repeated in SeqNo=262
 L:10121 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:264
 L:10417 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:274
 M:340 Repeated in SeqNo=274
 L:10695 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:279
 M:340 Repeated in SeqNo=279
 L:10709 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:280
 M:340 Repeated in SeqNo=280
 L:10988 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:285
 M:340 Repeated in SeqNo=285
 L:11081 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:286
 L:11269 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:292
 M:340 Repeated in SeqNo=292
 L:11391 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:296
 M:340 Repeated in SeqNo=296
 L:11439 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:298
 L:11484 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:300
 L:12272 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:318
 M:340 Repeated in SeqNo=318
 L:12374 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:320
 L:12613 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:330
 L:12749 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:336
 L:12795 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:338
 L:12966 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:342
 L:14041 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:361
 M:340 Repeated in SeqNo=361
 L:14073 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:362

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M:340 Repeated in SeqNo=362
L:14281 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:366
M:340 Repeated in SeqNo=366
L:14510 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:371
L:14557 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:372
L:14755 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:378
L:15181 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:393
M:340 Repeated in SeqNo=393
L:15255 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:396
M:340 Repeated in SeqNo=396
L:15795 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:408
M:340 Repeated in SeqNo=408
L:76811 M:252 E: No. of Seq. differs, <211> LENGTH:Input:770 Found:722 SEQ:1818